

CLAIMS:

1. A communications protocol for use in a network of devices, the protocol having a frame including a first time slot for transmitting data, a second time slot, after the first time slot, for transmitting a first acknowledgement state, and a third time slot, after the second time slot, for transmitting a second acknowledgement state.
2. A communications protocol according to claim 1 wherein the first acknowledgement state is a positive acknowledge and the second acknowledgement state is a negative acknowledge.
3. A communications protocol according to claim 2 wherein the first time slot is variable in length and the second and third time slots are fixed in length.
4. A communications protocol according to claim 2 wherein the positive acknowledge includes the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors and the negative acknowledge includes the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors.
5. A radio communication system including a transceiver/transmitter and at least two transceiver/receivers, wherein the transceiver/transmitter transmits data in a first time slot to the transceiver/receivers and wherein upon receipt of the data, each of the transceiver/receivers return either a first acknowledgement state in a second time slot, after the first time slot, or a second acknowledgement state in a third time slot after the second time slot.

6. A radio communication system according to claim 1 wherein the first acknowledgement state is a positive acknowledge and the second acknowledgement state is a negative acknowledge.
- 5 7. A radio communications system according to claim 6 wherein the first time slot is variable in length and the second and third time slots are fixed in length.
- 10 8. A radio communication system according to claim 7 wherein each transceiver monitors the transmission medium during any time slots during which each respective transceiver is not transmitting.
- 15 9. A radio communication system according to claim 8 wherein upon each transceiver/receiver detecting a correctly coded transmission in the negative acknowledge time slot, each transceiver/receiver discards the data previously received in the first time slot.
- 20 10. A radio communication system according to claim 9 wherein upon detecting a correctly coded transmission in the negative acknowledge time slot, the transceiver/transmitter retransmits the data to each of the transceiver/receivers.
- 25 11. A transceiver/receiver for use in a radio communication system including at least one transceiver/transmitter and at least one other transceiver/receiver, in use, the transceiver/receiver upon receiving a data packet in a first time slot from the transceiver/transmitter either transmits a first acknowledgement state in a second time slot, after the first time slot, or transmits a second acknowledgement state in a third time slot, after the second time slot.

12. A transceiver/receiver according to claim 11 wherein the transceiver/receiver further receives the first acknowledgement state in the second time slot from the at least one other transceiver/receiver in the communication system or receives the second acknowledgement state in the third time slot from the at least one other transceiver/receiver in the communication system.

5

13. A transceiver/receiver according to claim 12 wherein the first acknowledgement state is a positive acknowledge, and the second acknowledgement state is a negative acknowledge.

10

14. A transceiver/receiver according to claim 13 wherein the transceiver/receiver monitors the communications medium during a time slot during which the transceiver/receiver is not transmitting.

15

15. A transceiver/receiver according to claim 11 wherein upon receiving a negative acknowledge from the at least one other transceiver/receiver, the transceiver/receiver discards the data packet received in the first time slot.

20

16. A transceiver/receiver according to claim 15 wherein the discarded data is replaced with data retransmitted by the transceiver/transmitter.

17. A transceiver/transmitter for use in a communication system including at least one other transceiver/receiver, wherein in use, the transceiver/receiver transmits a data packet in a first time slot to the at least one transceiver/receiver and receives either a first acknowledge state in a second time slot after the first time slot from one or more of the transceiver/receivers or receives a second acknowledgement state in a third time slot after the second time slot from at least one of the transceiver/receivers.

25

18. A transceiver/transmitter according to claim 17 wherein the first acknowledgement state is a positive acknowledge and the second acknowledgement state is a negative acknowledge.

5 19. A transceiver/transmitter according to claim 18 wherein the transceiver/transmitter monitors the communications medium during a time slot during which the transceiver/transmitter is not transmitting.

10 20. A transceiver/transmitter according to claim 19 wherein upon receiving a negative acknowledge, the transceiver/transmitter retransmits the data to the at least one transceiver/receiver.

15 21. In a wireless network including a transceiver/transmitter and at least two transceivers/receivers, a method of disseminating data to be shared by the at least two transceiver/receivers, the method including:

Transmitting from the transceiver/transmitter, the data to the at least two transceiver/receivers;

Upon unsuccessfully receiving the data at at least one of the at least two transceiver/receivers, transmitting negative acknowledge data to indicate unsuccessful receipt of the data;

Retransmitting the data from the transceiver/transmitter; and

Replacing the data received by the plurality of transceiver/receivers with the retransmitted data.

25 22. A method according to claim 20 wherein the negative acknowledge data is also received by the transceiver/transmitter.

23. A method according to claim 21 wherein upon receiving the negative acknowledge, the other transceiver/receivers discard the data received from the transceiver/transmitter before receiving the retransmitted data.

24. A method according to claim 21 wherein the step of transmitting data is done in a first time slot, the step of transmitting the negative acknowledge is done in a second time slot and the step of retransmitting is done in a third time slot.

5 25. A method according to claim 23 wherein upon successful receipt of data, the transceiver/receiver transmits a positive acknowledge.

10 26. A method according to claim 25 wherein the step of transmitting the positive acknowledge is done in an additional time slot between the first and the second time slot.

27. A method of providing a marker in a data time frame, the method including:
15 encoding data bits at a particular point in a data sequence to provide states;

generating a state combination that is an illegal combination;
recognising that illegal combination as a marker.

28. A method according to claim 27 wherein the encoding used is Manchester coding.

20 29. A method according to claim 27 wherein a dc balance in the transmission is preserved.

25 30. A method according to claim 28 wherein the illegal combination commences with a state pair of OFF, OFF, or ON, ON.